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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,136	02/06/2006	Kezhi Qiao	14981-53920	8888

24728 7590 04/01/2009

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EXAMINER	
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ART UNIT	PAPER NUMBER
2419	

MAIL DATE	DELIVERY MODE
04/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,136	QIAO, KEZHI	
	Examiner	Art Unit	
	YOSIEF BERHANE	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-7 have been examined and are pending.

Response to Arguments:

2. On page 7 of Applicants Response, with regards to independent claim 1, applicant argues that the element of "the agent equipment dynamically recording message identifier of the media gateway to be registered and network address according to the register message" is not disclosed, taught or suggested in Akman. Furthermore, On Page, the applicant argues that the Message Identifier is an ID for identifying media gateway defined in MEGACO, which can be equipment name, user's name or other, and is the special content in MEGACO protocol, rather then traditional domain or IP address.

The examiner respectfully disagrees with applicants arguments for the following reason. In regards to the ***Message Identifier***, the examiner points out that the applicant defines, in Paragraph 0034, that the **message identifier** (MID) of the MEGACO signaling sent by the media gateway comprises the ***domain name of the media gateway, IP address or equipment name***. Furthermore, as specified in RFC 3525, "Gateway Control Protocol", section 8.3, the **message identifier of a message is set to a provisioned name which can be for example, domain address, domain name, or device name.** The examiner further points out that Akman discloses, in Fig 2A as well as Col. 3, lines 43-67, that a doman and IP address of a Media gateway and a Media Gateway Controller are recorded and stored in a NAT/firewall.

Furthermore, on page 8 of Applicants Response, with regards to independent claims 1, applicant argues: "the element of Step 2: for a MEGACO signaling that is unconcerned with media stream port of the media gateway, the agent equipment directly forwarding according to message identifier in the signaling" is not disclosed, taught or suggested in Akman

The examiner respectfully disagrees with applicants arguments for the following reason. Col. 5, lines 6-34 as well as Fig. 3a, Akman discloses where a media gateway sends a MEGACO off-hook message to a media gateway controller. The examiner points out that, as disclosed in section 7.1.9 of RFC 3525 "Media Gateway Control Protocol, an off-hook message is an event descriptor that has a default streamed of 0 in order to indicate that the event to be detected is not related to a particular media stream.

Furthermore, on pages 9-10 of Applicants Response, with regards to independent claims 1, applicant argues: the element of "step 3: for a MEGACO Signaling that is concerned with the media stream port, the agent equipment processing media stream attributes correspondingly, and then forwarding the signaling according to the message identifier in the Signaling" is not disclosed, taught or suggested in Akman

The examiner respectfully disagrees with applicants arguments for the following reason. Col. 3, lines 19-29, Akman discloses that a MEGACO signaling that is used by a Media Gateway Controller to control at least one Media Gateway, where the Media Gateway includes terminations, which, as specified by RFC 3525, are used for sinking/sourcing media streams, in which the media stream parameters are encapsulated with in the termination. See Section 6 and 6.2 of RFC 3525 "MEGACO Protocol" for details of terminations. Furthermore, Col. 4, lines 61-

67 and Col. 5, lines 1-34, Akman discloses a media gateway and a media gateway controller exchanging MEGACO protocol messages during an IP telephony call, where a firewall/NAT routes all of the messages between the devices according to domain/network/IP addresses (claimed media attribute). Note; terminations are used to source/sink multiple media streams during a multimedia conference, such as an IP telephony call. See section 6 and 6.2 of RFC 3525 for further details of terminations

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-5** are rejected under 35 U.S.C. 102(e) as being anticipated by Patent 7,146,410, filed on June 07, 2000 to Akman

As per claim 1, Akman teaches a method for realizing signaling agent in a network system (Col. 1, lines 38-44, Akman discloses where a Network Address Translation (NAT) is strategically implemented to inspect and translate control protocol messages exchanged between

nodes on separate IP networks, where the nodes are a media gateway controller, and a media gateway that exchange MEGACO messages.),

the network system comprising media gateways and a media gateway controller in different networks (Col 1. lines 38-44, Akman discloses a method for ensuring that the control protocols (e.g., MEGACO) can be used between Media Gateways (MGs) and Media Gateway Controllers (MGCs) that reside on separate IP networks),

and at least one agent equipment (fig. 1A, box 160, Firewall/NAT router) on a boundary of different networks (fig.1A, box 150 and box 120) where a MEGACO protocol is adopted between the media gateways (fig. 1A, box 140 and 130) and the media gateway controller (fig.1A, box 110) (Col. 2, lines 6-18, Akman discloses where a firewall/NAT router is placed in between two separate IP networks for translating IP addresses of control protocol messages sent between MG and MGC nodes on separate IP networks.),

wherein the agent equipment(fig. 1A, box 160, Firewall/NAT router, Akman)

has at least two network addresses: one being a first network address in a network of the media gateway controller and the other one being a second network address in a network of a media gateway side, the method comprising the steps of (Fig. 2A shows a firewall/NAT, box 160, with two IP addresses, the first address on the IP network which the media gateway resides and a second IP address on the IP network where the media gateway controller resides. Also see, Col. 2, lines 6-18.) :

step 1: a media gateway (Fig. 1A, box 140, MG, Akman)

requesting be registered to the media gateway controller (Col. 4, lines 18-24, Akman discloses that In the MEGACO protocol, when an MG becomes available, it registers itself with

its MGC using a Service Change message. Note; the Service Change message is a request message sent from the media gateway in order to be registered with the media gateway controller. Also, Fig 2A, shows a media gateway registering with a media gateway controller)

and the agent equipment (Fig. 2A, box 160, Firewall/NAT, Akman)

dynamically recording message identifier of the media gateway to be registered (Akman discloses, in Fig 2A as well as Col. 3, lines 43-67, that a domain address (claimed message identifier) of a Media gateway and a Media Gateway Controller are recorded and stored in a NAT/firewall)

and network address according to the register message (Akman discloses, in Fig 2A as well as Col. 3, lines 43-67, that a IP address (claimed network address) of a Media gateway and a Media Gateway Controller are recorded and stored in a NAT/firewall);

step 2: for a MEGACO signaling that is unconcerned with a media stream port of the media gateway (Col. 5, lines 6-34 as well as Fig. 3a, Akman discloses where a media gateway sends a MEGACO off-hook message to a media gateway controller. Note, as disclosed in section 7.1.9 of RFC 3525 "Media Gateway Control Protocol, an off-hook message is an event descriptor that has a default streamed of 0 in order to indicate that the event to be detected is not related to a particular media stream),

the agent equipment directly forwarding the signaling according to a message identifier in the signaling (Fig. 3A, Akman discloses where an agent equipment (box 160, Firewall/NAT) forwards an off-hook signaling message from a media gateway to a media gateway controller by using the Domain/Network address and the IP address of the media gateway and the media gateway controller);

and step 3: for a MEGACO signaling that is concerned with the media stream port(col. 3, lines 19-29, Akman discloses that a MEGACO signaling that is used by a Media Gateway Controller to control at least one Media Gateway, where the Media Gateway includes "terminations", which are used for sending/receiving media streams, in which the media stream parameter are encapsulated with in the termination. See Section 6 and 6.2 of RFC 3525 "MEGACO Protocol" for details of terminations),

the agent equipment processing media stream attributes correspondingly (Col. 4, lines 61-67 and Col. 5, lines 1-34, Akman discloses a media gateway and a media gateway controller exchanging MEGACO protocol messages during an IP telephony call, where a firewall/NAT routes all of the messages between the devices according to domain/network/IP addresses (claimed media attribute). Note; terminations are used to source/sink multiple media streams during a multimedia conference, such as an IP telephony call. See section 6 and 6.2 of RFC 3525 for further details of terminations),

and then forwarding the signaling according to the message identifier in the signaling (Col. 4, lines 61-67 and Col. 5, lines 1-34, Akman discloses a firewall/NAT that routes all of the messages between the devices according to domain/IP addresses (claimed message identifier) of the media gateway and the media gateway controller).

As per claim 2, the method for realizing signaling agent of claim 1, wherein each media gateway under a same media gateway controller has a unique message identifier of the MEGACO signaling (Fig. 1A, Akman discloses two media gateways (box 140 and box 130) that

have two unique Domain/Network addresses as well as unique IP addresses. Note; both media gateways are under the control of one media gateway controller (box 110)),

and the media gateway controller distinguishes different media gateways by the message identifier (Col. 3, lines 43-67, Akman discloses where a Media Gateway Controller uses a Domain and IP addresses of the corresponding media gateways in order to exchange MEGACO messages, thus being able to distinguish between the media gateways. Also see Fig. 1A).

As per claim 3, Akman teaches the method for realizing signaling agent of claim 1, wherein the message identifier of each MEGACO signaling sent from the media gateway controller to the media gateway comprises the message identifier of the media gateway (Fig. 2A, Akman discloses a media gateway exchanging MEGACO signaling messages with a media gateway controller (box 110, MGC) via an agent equipment (box 160, Firewall/NAT). When the agent equipment receives the signaling messages, the agent equipment uses/stores appropriate Domain/Network address as well as the appropriate IP address of the media gateway in order to route the signaling messages.),

As per claim 4, Akman teaches the method for realizing signaling agent of claim 1, wherein the IP address and port of the media gateway controller configured on the media gateway are same as the second network address and port of the agent equipment (Col. 2, lines 6-18, Akman discloses that the firewall/NAT router includes a port having an IP address on a first IP network for receiving a control protocol message from a media gateway having an IP address on the first IP network. The firewall/NAT also has a second IP address on the second IP network

which is used to route control protocol messages to a media gateway controller. Also see Fig.1A).

As per claim 5, Akman teaches the method for realizing signaling agent of claim 1, wherein the registering procedure of step 1 comprises the steps of: 1) the media gateway sending the register message to the media gateway controller (Col. 4, lines 18-24, Akman discloses that when a media gateway becomes available, it registers itself with its media gateway controller by sending a Service Change message. Also, see Fig. 2A),

the agent equipment receiving the message on the second network address and corresponding port (Col. 4, lines 25-41, Akman discloses where the Service Change message is received by a firewall/NAT which has a port connected with a second IP address. Also, see Fig. 2A),

recording an IP source address, port number and message identifier of the media gateway sending the message, and generating a piece of information of the media (Fig. 2A, Akman discloses a procedure for a media gateway registering with a media gateway controller. The register request is received by the agent equipment (box 160, Firewall/NAT) which stores (box 220) the Domain and IP address of the media gateway (box 140) in a table. Also, the Firewall/NAT has a port on the first IP network that links to the media gateway);

2) the agent equipment forwarding the registering message to the media gateway controller through the first network address (Col. 4, lines 25-41, Akman discloses that the firewall/NAT sends the MEGACO request to register message (fig.2A, box 220) to the MGC using the substitute IP address. Also see Fig. 2A);

3) the media gateway controller registering the media gateway according to the domain name thereof (Col. 4, lines 25-41, Akman discloses that, after the firewall NAT forwards the Service Change message to the MGC, the MGC responds with a Service Change Reply message containing its IP address. The firewall/NAT relays the Service Change Reply message to the MG with the appropriate IP address and domain, thus completing the registration),

after registering successfully, the media gateway controller returning a reply signaling to the media gateway (Col. 4, lines 25-41, Akman discloses that the MGC responds with a Service Change Reply message containing its IP address),

the message identifier of the reply signaling including information on domain names of the media gateway and the media gateway controller (Col. 4, lines 25-41, the MGC responds with a Service Change Reply message containing its Domain and IP address. The firewall/NAT relays the Service Change Reply message to the MG with the appropriate Domain and IP address, thus the reply message contains IP and domain addresses of both the Media gateway controller and the media gateway.);

and 4) the agent equipment receiving the reply signaling from the first network address (Fig. 2A as well as Col. 4, lines 25-41, Akman discloses that the firewall/NAT relays the Service Change reply message from the media gateway controller on the second IP address to the media gateway on the first IP address.),

analyzing the domain name of the media gateway in the signaling (Col. 4, lines 25-41, Akman discloses where The firewall/NAT inspects the Service Change message in order to translate the IP address and domain from the first network to the second network),

searching and obtaining address of the media gateway from information recorded and forwarding to corresponding media gateway from the second network address (Fig. 2A as well as Col. 4, lines 25-41, Akman The firewall/NAT relays the Service Change Reply message to the MG with the appropriate Domain and IP Address, thus completing the registration).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 6 -7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent 7,146,410 to Akman and further in view of Non Patent Literature "RFC 3525 – Gateway control Protocol Version 1" to Network Working Group.

As per claim 6, Akman teaches the method for realizing signaling agent of claim 5, wherein step 3 further comprises the steps of 1) the agent equipment receiving the MEGACO signaling for establishing or modifying media stream port sent to the media gateway from the media gateway controller (Col. 4, lines 61-67 and Col. 5, lines 1-34, Akman discloses a media gateway and a media gateway controller exchanging MEGACO protocol messages during an IP telephony call, where a firewall/NAT routes all of the messages between the devices according

to domain/network/IP addresses. Also, in col. 3, lines19-29, Akman discloses that a MEGACO signaling that is used by a Media Gateway Controller to control at least one Media Gateway, where the Media Gateway includes "terminations", which are used for sending/receiving media streams),

establishing or modifying corresponding media stream forwarding port and forwarding table on the agent equipment (Fig. 3A, Akman discloses a basic IP telephony call where MEGACO messages are exchanged between a media gateway (box 140) and a media gateway controller (box 110). Furthermore, the agent equipment (box 160, firewall/NAT) has two ports on different IP networks as well as stored IP and Domain addresses (310) that are used to route the MEGACO messages from the media gateway to the media gateway controller),

replacing relevant media information in the MEGACO signaling with corresponding network address information of media stream forwarding port on the agent equipment (Col. 4, lines 61-67, as well as Col. 5, lines 6-34, Akman discloses. For the signaling messages traversing back and fourth between the devices, the firewall/NAT creates and maintains a NAT table that links/translates addresses in the first IP address to the second IP address, thus adding/replacing appropriate addressing information in the message to route the data accordingly.),

and forwarding the signaling to corresponding media gateway (Col. 4, lines 61-67, as well as Col. 5, lines 6-34, Akman discloses an example of a basic IP telephony call, where signaling messages are exchanged between an MG and an MGC using the firewall as a MEGACO NAT device. The firewall/NAT routes the signaling messages back and fourth between the media gateway and the media gateway controller.);

2) the media gateway processing MEGACO signaling received, and returning a reply signaling (Col. 5, lines 35-47, Akman discloses when the MG receives the MEGACO Modify message it responds back to the MGC with a MEGACO Notify message.);

3) the agent equipment modifying forwarding table of corresponding media stream forwarding port according to the reply signaling received (Col. 5, lines 35-47, Akman discloses where the replay message is received into the firewall/NAT and a NAT IP address substitution takes place ensuring that the message reaches the MGC with the appropriate IP and Domain address),

replacing media information in the signaling with corresponding network address information of media stream forwarding port on the agent equipment (Col. 5, lines 35-47, Akman discloses where the replay message is received into the firewall/NAT and a NAT IP address substitution takes place ensuring that the message reaches the MGC with the appropriate IP and Domain address.),

and forwarding to the media gateway controller (Col. 5, lines 35-47, Akman discloses where the replay message is received into the firewall/NAT and a NAT IP address substitution takes place ensuring that the message reaches the MGC, thus the reply message is forwarded to the media gateway controller);

Although Akman discloses an example of a basic IP telephony call, where signaling messages are exchanged between an MG and an MGC using the firewall as a MEGACO NAT device, where the MEGACO NAT device routes/forwards the signaling messages appropriately to the different networks (Col. 5, lines 6-59).

The reference is silent on, the media gateway controller sending a subtract signaling for releasing media stream port to the media gateway after calling finishes.

However, "RFC 3525, Gateway control Protocol" in section 7.2 discloses where subtract command disconnects a termination from its context. The subtract command on the last termination in a context deletes the context, thus a media gateway controller will send a subtract command to a media gateway to end a media stream.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Akman by using a subtract command to end a media stream, as suggested by "RFC 3525 – Gateway Control Protocol". The suggestion for the modification is because multiple media gateways on multiple networks have the ability to support multiple terminations per context. The modification would benefit the system by ensuring that media gateway controllers can reliably disconnect a termination from a context by using a subtract command.

As per claim 7, the combination of Akman and "RFC 3525 – Gateway Control Protocol" teach for the signaling received by the agent equipment being the reply signaling of establishing media stream port (col. 3, lines19-29, Col. 4, lines 61-67 and Col. 5, lines 1-34. Also see Fig. 3A),

the agent equipment recording a termination ID of the media stream port of the media gateway MG on the agent equipment, and determining media stream forwarding port for releasing according to the termination ID (RFC 3525, Gateway control Protocol" in section 6.2 discloses where a termination is a logical entity on a MG that sources and/or sinks media and/or

control streams. A termination is described by a number of characterizing properties, which are grouped in a set of descriptors that are included in commands. Terminations have unique identities (TerminationIDs), assigned by the MG at the time of their creation. Also in section 7.2, "RFC 3525, Gateway control Protocol" discloses where subtract commands disconnects a termination from its context).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Akman by using a termination ID to identify and release a media stream of a media gateway, as suggested by "RFC 3525 – Gateway Control Protocol". The suggestion for the modification is because multiple media gateways on multiple networks have the ability to support multiple terminations per context. The modification would benefit the system by ensuring that media gateway controllers can uniquely identify and reliably disconnect a termination of a media gateway by using a termination ID.

Conclusion

5. Prior arts made of record, not relied upon:

US 20030033418 to Young et al. discloses a method of implementing and configuring an MGCP application layer gateway

US 7224696 to Bouleros et al. discloses access nodes in packet-based communications networks

US 20040024902 to Mikkola discloses Megaco protocol with user termination

US 7068647 to Fangman et al. discloses a System and method for routing IP packets

US 7369535 to O'Brien, Jr. et al. discloses Voice over Internet Protocol real time protocol routing

US 6885658 to Ress et al. discloses Inter-working apparatus that communicates using different Internet protocol (IP) telephony protocols uses call server

US 6870845 to Bellovin et al. discloses method for providing privacy by network address translation

US 6728356 to Carroll discloses method and apparatus for providing telephony services by switch-based processing of media streams

US 6832254 to Scoggins et al. discloses method and apparatus for associating an end-to-end call identifier with a connection in a multimedia packet network

US 7283519 to Girard discloses distributed edge switching system for voice-over-packet multi-service network

US 7293080 to Clemm et al. discloses automatically discovering management information about services in a communication network

US 7451207 to Oliver discloses predictive provisioning of media resources

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yosief Berhane whose telephone number is (571) 270-7164. The examiner can normally be reached at 9:00-6:00 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached at 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is. 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/YOSIEF BERHANE/

Examiner, Art Unit 2419

/Wing F. Chan/

Supervisory Patent Examiner, Art Unit 2419

3/26/09